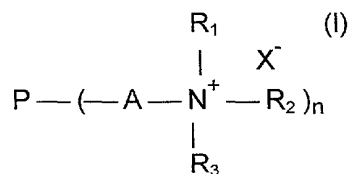


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Claims

1. An aqueous sizing dispersion comprising a sizing agent, starch having aromatic groups and a condensed sulfonate, wherein the starch contains less than 95 weight % of amylopectin.
2. The aqueous dispersion according to claim 1, wherein the starch contains less than 90 weight % of amylopectin.
3. The aqueous dispersion according to claim 1, wherein the condensed sulfonate is a condensation product of aromatic sulfonic acids and aldehyde.
4. The aqueous dispersion according to claim 1, wherein the condensed sulfonate is a condensation product of aromatic sulfonic acids and formaldehyde.
5. The aqueous dispersion according to claim 1, wherein the condensed sulfonate is a condensation product derived from aromatic compounds selected from naphthalene, naphthalene and cresol, diphenyl ether, toluene, isopropylbenzene, cresol, and phenol.
6. The aqueous dispersion according to claim 1, wherein the condensed sulfonate is a condensation product of naphthalene sulfonic acid and formaldehyde.
7. The aqueous dispersion according to claim 1, wherein the sizing agent is a cellulose-reactive sizing agent.
8. A method of sizing paper comprising adding an aqueous sizing dispersion comprising a sizing agent, starch having aromatic groups containing less than 95 weight % of amylopectin and a condensed sulfonate, to an aqueous suspension containing cellulosic fibres, forming and dewatering the suspension on a wire, wherein the suspension has a conductivity of at least 0.5 mS/cm.
9. The method of sizing paper according to claim 8, wherein the suspension has a conductivity of at least 4.5 mS/cm.
10. The method of sizing paper according to claim 8, wherein the starch contains less than 90 weight % of amylopectin.
11. The method of sizing paper according to claim 8, wherein the condensed sulfonate is a condensation product of naphthalene sulfonic acid and formaldehyde.
12. The method of sizing paper according to claim 8, wherein the sizing agent is a cellulose-reactive sizing agent.
13. An aqueous sizing dispersion comprising a sizing agent, starch having the general structural formula (I):



wherein P is a residue of a starch; A is a chain of atoms comprising C and H atoms attaching N to the polysaccharide residue, R<sub>1</sub> and R<sub>2</sub> are each H or a hydrocarbon group, R<sub>3</sub> is an aromatic hydrocarbon group, n is an integer from 2 up to 300000, and X<sup>-</sup> is an anionic counter ion, and a condensed sulfonate, wherein the starch contains less than 95 weight % of amylopectin.

14. The aqueous dispersion according to claim 13, wherein the starch contains less than 90 weight % of amylopectin.

15. The aqueous dispersion according to claim 13, wherein the condensed sulfonate is a condensation product of aromatic sulfonic acids and aldehyde.

16. The aqueous dispersion according to claim 13, wherein the condensed sulfonate is a condensation product of aromatic sulfonic acids and formaldehyde.

17. The aqueous dispersion according to claim 13, wherein the condensed sulfonate is a condensation product derived from aromatic compounds selected from naphthalene, naphthalene and cresol, diphenyl ether, toluene, isopropylbenzene, cresol, and phenol.

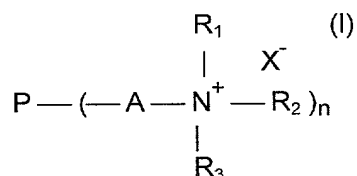
18. The aqueous dispersion according to claim 13, wherein the condensed sulfonate is a condensation product of naphthalene sulfonic acid and formaldehyde.

19 20. The aqueous dispersion according to claim 13, wherein R<sub>1</sub> and R<sub>2</sub> are alkyl groups having at least 2 carbon atoms, and R<sub>3</sub> is an aralkyl group including benzyl and phenylethyl groups.

20 21. The aqueous dispersion according to claim 13, wherein the sizing agent is a cellulose-reactive sizing agent.

21 22. The aqueous dispersion according to claim 13, wherein the sizing agent is selected from ketene dimers and acid anhydrides.

22 23. A method of sizing paper comprising adding an aqueous sizing dispersion comprising a sizing agent, starch having the general structural formula (I):



wherein P is a residue of a starch; A is a chain of atoms comprising C and H atoms attaching N to the polysaccharide residue, R<sub>1</sub> and R<sub>2</sub> are each H or a hydrocarbon group, R<sub>3</sub> is an aromatic hydrocarbon group, n is an integer from 2 up to 300000, and X<sup>-</sup> is an anionic counter ion, and a condensed sulfonate, the starch containing less than 95 weight % of amylopectin, and a condensed sulfonate, to an aqueous suspension containing cellulosic fibres, forming and dewatering the suspension on a wire, wherein the suspension has a conductivity of at least 0.5 mS/cm.

- 23 24. The method of sizing paper according to claim 23, wherein the suspension has a conductivity of at least 4.5 mS/cm.
- 24 25. The method of sizing paper according to claim 23, wherein the starch contains less than 90 weight % of amylopectin.
- 5 26. The method of sizing paper according to claim 23, wherein the condensed sulfonate is a condensation product of naphthalene sulfonic acid and formaldehyde.
- 26 27. The method of sizing paper according to claim 23, wherein the sizing agent is a cellulose-reactive sizing agent.

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